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NETTLE-CLOTH.

Some little time ago, when one of our most distinguished botanists was asked his opinion about the desirability of forming a collection of all the vegetable substances which are or have been used in medicine both by civilised and savage races, he replied that it would take a large building to hold it. Although a series of fibre-yielding plants would be much less in number, the list would still be a long one, provided we knew all those in use by savage tribes. Very few of these, however, are extensively used for clothing. Putting aside wool and silk, which are animal products, we have only cotton and flax of prime importance. Hemp of fine quality is largely grown in Italy, and there woven into cloth for ordinary purposes; but as yet this use of hemp in other civilised countries appears to be limited, though the fibre is everywhere employed for cordage. With the exception of jute, which is chiefly made into coarse fabrics, all other vegetable fibres believed to be suitable for important textile industries may be said to be as yet only on their trial. But a number—such as the so-called New Zealand flax (*Phormium tenax*), Manila hemp (*Musa textilis*), pine-apple (*Bromelia ananas*), American aloe (*Agave Americana*), and some yielded by certain species of palms—are known to possess very valuable properties. We have omitted to mention any members of the Nettle tribe—to which, however, the hemp-plant is closely allied—as we propose to say a few special words about them.

Growing both wild and cultivated in suitable localities scattered over a large area in South-eastern Asia, there is a species of nettle to which a peculiar interest is attached. The reason of this is that the liber or inner side of its bark yields a fibre excelling every other derived from the vegetable kingdom for fineness, strength, and lustre combined. In China, this fibre is called by English-speaking people, China grass; in India it is called *rhea;* and in the Malayan Archipelago by the name of *ramie.* It was some time before botanists discovered that the material which was known in commerce by three different names was the produce of the same plant—a stingless nettle. For more than half a century, much attention has now been devoted to the *Urtica nivea* or *Bœhmeria nivea* (a newer name), as the China grass plant is called in scientific language. Long in use in China and Japan for making ropes and cloth—much of the latter being of very fine quality—it was introduced into England for manufacturing purposes soon after Mr Fortune the well-known botanist returned in 1846 from his travels in China. Small quantities had, however, been sent to England long before this. Even as early as 1810, some bales of the Indian-grown fibre were received at the India House, London, and its great strength as a rope-making material ascertained. Indeed, it is stated on high authority, that this fibre has been in use in the Netherlands since the sixteenth century.

In Messrs Marshall's great flax-mill at Leeds, China grass was spun to some extent for about ten years after 1851, and its snow-white silky yarn is more or less constantly in use in some kinds of Bradford fabrics. But unlike the jute fibre, which has created in the course of a single generation a gigantic industry, the trade in China grass has scarcely advanced at all. The value of the latter is admitted on all hands; there is practically an unlimited demand for it; plenty of it could be grown in India, and yet it is not cultivated to any extent. This is solely owing to the great amount of manual labour required to separate the fibre and bark from the stem, and then the fibre from the bark, no machine having been yet invented which will do this at once efficiently and cheaply.

The Indian government have long been vexed that the latent wealth of the plant yielding this much-prized rhea fibre cannot be realised. In 1869 they offered a prize of five thousand pounds for the best, and another of two thousand pounds for the second-best machine which would separate and prepare the fibre, at a cost of fifteen pounds per ton in India, in such a way that it would fetch fifty pounds per ton in England. It may here be mentioned that it sometimes sells as high as eighty pounds per ton, and even higher; while

the highest price for jute rarely exceeds twenty-five pounds, and for flax of fine quality, forty pounds. Naturally, the Indian administration hoped that the offer of these handsome prizes would bring forward as competitors some of the ablest machinists in Europe. But whether it was owing to the inherent difficulty of the problem, to the expense of taking out heavy machines to India, or to that apathy with which it is frequently said we in this country regard everything Indian, practically nothing came of the competition. Mr John Greig of Edinburgh sent a machine for trial which so far met the conditions that he received a douceur of fifteen hundred pounds. About thirty competitors applied to have their machines tried; but eventually Mr Greig alone put in an appearance. It was found that by his method it cost fully fifteen pounds per ton to prepare the fibre in India; and when this was sent to London, it was valued at only twenty-eight pounds per ton.

In 1875, Dr Forbes Watson—one of a small band of scientific men who have done much to bring under notice the industrial resources of India—suggested that, in order to save the expense of freight, trials of machines should be made in England instead of India. Green stems of the plant grown in the south of France were promised for the purpose; and towards the end of that year, several inventors had entered their machines for competition; but owing to unforeseen difficulties, it was found impossible to hold the trials. Unwilling to abandon the hope of attaining their great object, the government of India issued a new notification to inventors in 1877. This time the prizes offered were five thousand pounds for the best, and one thousand pounds for the second-best machine or process for preparing rhea fibre which would be worth forty-five pounds per ton in London, at a cost of not more than fifteen pounds per ton laid down at any port of shipment in India. The trials having been arranged to take place, as before, at Saháranpur in September 1879, ten competitors appeared; but only seven had their machines tested. When the fibre prepared by each arrived in London, it was found that the highest value put upon any of the samples was twenty-six pounds per ton. Accordingly, none of the competitors could claim the full amount of either of the prizes; but Messrs Van der Ploeg and Nagoua, two textile machinists well known on the continent, were each awarded five hundred pounds, and Mr Cameron one hundred pounds. On the failure of this second competition, it was determined not to renew the offer of a prize until it could be proved by private enterprise that the rhea plant could be cultivated with profit in India. The unfavourable reports on the best samples prepared at the second trial at Saháranpur seem to have convinced the Indian government that at present the prospect of producing Indian rhea which would successfully compete with the fibre of the same plant grown and prepared in China, is not very hopeful.

Notwithstanding this second failure on the part of the government of India to obtain by rewards a machine capable of turning the cultivation of the rhea plant in that country into a commercial success, so confident are many good judges of the great value of China grass as a textile material, that the interest in it is increasing from year to year. Its cultivation is spreading over Southern Europe, considerable areas being now laid out into plantations of China grass in Italy and the south of France. Spain and Portugal are beginning to grow it; and on the south side of the Mediterranean, Algiers and Egypt are also moving in the same direction. It is believed that this recent development of ramie culture in the Mediterranean region—to call the plant by the name our French neighbours appear to prefer—is to some extent owing to Favier's recent method of treating the fibre, the patent for which is owned by a Company located at Avignon. This plan is very simple, and considering how much the use of steam—we do not mean as a motive force—has quickened many processes, even in the textile industries, it is wonderful that it had not been thought of before. M. Favier merely exposes the stems of the plant to the action of steam for about twenty minutes in a closed wooden trough, after which the bark and fibre are easily stripped from the stem. By the retting process, or steeping in cold water, it takes days, sometimes weeks, to effect the decortication of the stems; and we have seen how difficult it has been found to do this by machinery. But although M. Favier's process greatly simplifies matters in this early stage of the preparation of the fibre, the gummy substance and outer skin still require to be removed from it.

Only the other day, it was announced that Professor Frémy, a distinguished French chemist, has, after an elaborate series of experiments, found out a method of readily separating the fibre from these extraneous matters. He takes up the ribbons of bark with attached fibre, as obtained by M. Favier's plan, and subjects them to a peculiar treatment, which mainly consists in boiling them under pressure in an alkaline solution. During the operation, everything deleterious is removed from the useful portion of the fibre, which is then ready for the ordinary operation of the spinner. There seems good grounds for believing that the combined processes of Messrs Favier and Frémy, which are about to be tried on a scale of some magnitude in France, will prove a commercial success. It will be curious to watch the future history of a plant which has so long baffled every attempt to raise it into conspicuous importance as an article of commerce, about which volumes have been written, and the fibre of which is now well known by its valuable properties to those engaged in textile industries in every civilised country.

There is another Indian nettle, called *Urtica heterophylla*, which produces a strong, fine, white, glossy fibre. Best known by the name of the Neilgherry nettle, it is nevertheless widely diffused over India. The stem, branches, and leaves are covered with stiff sharp bristles, which give it a formidable, or, as some say, a ferocious appearance. These also inflict acute pain if they should happen to be touched, but fortunately the effect of the sting soon passes away. The prepared fibre of this plant is sometimes called vegetable wool; and it is better suited, from its appearance, for mixing with real wool than rhea fibre, which has been a good deal used for this purpose. In some parts of India, the fibre of the Neilgherry nettle is used by the natives in the manufacture

of cloth. It has been partially experimented upon for textile purposes in England; but there seems to have been a difference of opinion as to its merits. Owing to its sting, there are even greater difficulties in separating its fibre than is the case with rhea; but these might be overcome by some mechanical or chemical treatment. It is a quick-growing plant, and could be cultivated to any extent, should a demand for it arise.

We must pass over other species of *urtica*, and come to the common stinging nettle of Europe. As is well known, this plant furnishes a nutritious food for swine and some other animals, and in Scotland is occasionally used for making a kind of soup termed nettle kail; and in default of a better, its roots will furnish, along with alum, a yellow dye. The tenacity of its fibre has long been known. It has been woven into cloth in past times, but no doubt only on a limited scale, in nearly every country where the plant grows. Nor have its properties as a textile material been altogether overlooked in modern times, at least in the British Islands, since lace, parasol covers, and other fancy articles made of common nettle fibre have been on exhibition in the Museums of Economic Botany at Kew and Dublin for the last thirty years, besides having been occasionally brought under the notice of the public in various other ways. At Dresden, Herr F. C. Seidel has recently established a manufactory for nettle-cloth, in which, according to what seems to be an authentic report, he uses fibre of the common species; but the significant remark is added, that he prefers to get his material from the Chinese nettle.

Some persons think that they see a great nettle industry looming in the future, if only a process of readily separating the useless parts of its stem without injuring the fibre could be discovered. We are of course speaking of the common nettle. A statement has been published which one can very readily believe—namely, that the profitable extraction of its fibre is possible only when it is cultivated. In the wild state, the plant is branchy; but when grown on suitable soil at regular distances of from five to eight inches apart, it forms single stems from four to fully seven feet high. Even if they would serve as well as cultivated plants, and could be economically gathered from many widely scattered localities, all the wild nettles growing in our waste places and old churchyards would be a bagatelle in the sense of furnishing material for many large spinning-mills.

Whatever sanguine people may think, other things besides skilful cultivation and an easy process of preparing the fibre will determine whether nettle crops will be profitable; or, to put the matter in another way, whether a great industry is likely to be established by the manufacture of nettle-cloth. There is no difficulty in cultivating or in dressing flax, nor any lack of demand for it; yet shrewd Scotch farmers have found out that other crops are more profitable, and therefore the blue-blossomed flax fields which many of us saw in our boyhood in Central Fife and the Lowlands of Scotland have entirely disappeared. If nettle-cloth is ever to be anything but a curiosity, it will require to have attractions in quality and price which will enable it to compete with other textiles. During the American civil war, the jute-mills of Dundee were turning out many thousands of yards of cheap but serviceable fabrics to be used instead of calico, because the cost of the latter had gone up a little. For some of the purposes to which it was applied, the jute did as well as the cotton. But the war having ended, calico of a certain 'make' and quality became once more a trifle cheaper than its rival, and so jute was quickly beaten out of the field again. This is an example of the kind of battle which any fibre new to commerce will have to fight, unless it possesses some property of quite exceptional value.

To many persons, it seems a pity that we cannot utilise a plant which yields something useful. But the nettle is by no means the most striking example of a native plant which might be and yet is not used in the arts. One or two species of fern, such as the common bracken, are greatly more abundant in this country than the nettle—whole hillsides in many districts being covered with them. Yet although a very serviceable paper can be made from ferns, paper manufacturers prefer to send to the shores of the Mediterranean for a species of wild grass to supply their mills. For several years past, an ingenious Glasgow chemist has been trying to make a marketable gum or jelly from the common seaweed, thrown up in great abundance on the western coasts of Scotland. We hope he may succeed; but meanwhile we are sending elsewhere for what we require of seaweed jelly—even to far Japan. The peat-mosses of Ireland—and of Scotland too, for that matter—would furnish an endless number of beautiful paraffin candles, if some great Company with limited liability would only take the business up—and make the candles at a trifling loss per pound.

Some of our readers will probably suppose that we have given them a too humble estimate of the value of the common nettle as a textile material. There is no denying the fact that the tenacity of its cortical fibres is scarcely if at all inferior to those of flax or hemp. But how to grow, spin, and weave them into a saleable cloth, is a problem which has not yet been solved. Just now, there is a partial revival of what may be almost called the ancient art of manufacturing hand-made paper for printed books. In these days, too, many of the fair sex have apparently discovered that embroidery when worked by hand is really more interesting and beautiful than when it is done by a machine, supposing that in both cases the design is of nearly equal merit. It seems also to be dawning on many persons that earthenware dishes painted by the fingers have, even when a little dauby, a kind of attraction about them not possessed by those which have their patterns printed from an engraved copper-plate, and are therefore all rigidly alike. Possibly, 'fashion' may carry matters a little farther in this direction, and revive the use of textile fabrics spun by the distaff and spindle, and woven on handlooms. But by the help of machinery, the labour of one woman can nowadays make clothing for more than a thousand others. A hundred years ago, nearly every woman had to spin the material required for the clothing of her family; but at that same time, or at least not long before it, those in the upper ranks had a knowledge of many useful and ingenious arts

which they no longer possess. If it were possible but in part to resuscitate the state of matters which obtained in these old days, before spinning-jennies, or powerlooms, or lace-making machines were dreamed of, there would be fully more hope than there is of people keeping themselves warm by an external application of the stinging nettle, in a less heroic way than we are told the Romans did of old.

Nettle-cloth is undoubtedly an excellent fabric, but—Will it pay the manufacturer? The answer to this is, Not yet.

BY MEAD AND STREAM.

CHAPTER XVI.—LIGHT HEARTS AND SAD.

THE buzz of conversation continued as the party descended the broad staircase.

'Rather bad of Phil to keep us waiting all this time,' said Coutts as he gave Madge his arm.

'Perhaps he could not help it,' she suggested.

'Ah, perhaps not. But you see Wrentham hasn't turned up yet either, and I daresay they have been lunching together,' rejoined Coutts with a smile, which was to her a very unpleasant one.

They had only taken their places at table, when Philip and Wrentham quietly entered. There was an agreeable murmur of satisfaction at the arrival of the gentleman in whose honour they had met, and his greeting was as cordial as if nobody were hungry on his account.

No one except Madge appeared to observe the singular alteration in his appearance. He was pale, his eyes seemed heavy like those of one wakening from sleep, and the smile with which he responded to the welcome of his friends was forced—his expression altogether unlike what she had expected it to be. His walk, too, was that of one who was carefully measuring each step. For an instant, the ugly suggestion of his brother, that he had been taking too much wine at lunch, occurred to her.

He took his seat by her side; dinner proceeded. Presently general conversation was resumed, and the cause of the temporary delay of the banquet appeared to be forgotten.

But to Madge the brilliant light of the room and the merriment around them only made that pale-faced man beside her the more unlike Philip.

'I am sorry I could not get here sooner,' he said in an undertone, and his voice sounded unusually feeble.

'What is the matter, Philip? Why are you so pale?'

'You cannot expect me to be taking leave of all my friends without feeling queer,' he answered with an attempt to smile.

'That is not it—you are ill.'

'I am—a little; and don't bother about it just now. I'll tell you how it happened, by-and-by.'

'How what happened?'

'I have hurt myself. There now; don't be alarmed—it is nothing. You see I am here; and I don't want to spoil the evening by letting our friends know it. Look at the girls; they would go into fits if things didn't come off just as they planned them.'

'How did you do it?' she asked calmly.

'That mare Wrentham bought from Uncle Dick tumbled over me; that's all. I'll be as well as ever, when I've had a little rest.'

'Have you seen a doctor?'

'Not yet. The fact is, I was taking a nap at Wrentham's, to brace me up for the evening.'

'You mean that you were insensible?'

'Perhaps that was it. But don't think about it. Have some wine?'

When the ladies were retiring, Philip opened the door for them; but that was the last effort his strength allowed him to make. He felt giddy and faint.

'Help me up-stairs,' was all he could say to Dr Joy, who was at his side.

Edwin Joy was a little dark man, but he was sinewy and active. He wheeled Philip round so that he placed him easily in a chair near the table.

'Don't stir, anybody,' he said quickly to the astounded guests.

'Drink this,' he said to Philip, holding a glass to his lips. . . . 'Better?'

Philip nodded.

'Take a little more. I have been watching you, and knew there was something wrong. What have you been doing?'

All this was uttered rapidly, but in a low and cheery tone, not to alarm the hearers.

'Riding. The mare was fresh and skittish. The man warned me that she had been at high feeding for some days, and getting little to do. But I knew the mare, and thought I could manage her. She tried to throw me—then stood bolt upright—lost balance, and fell back over me.'

'Ah! Feet and legs all right. Where were you hurt?'

'I don't know. I was slipping off; but there is a queer sensation here.'

The little doctor passed his hands rapidly over the side to which Philip pointed, and beckoned to Dr Guy.

The guests had obeyed the doctor's injunction not to leave their seats. His words acted like a charm in a fairy tale, and they were suddenly spell-bound in the position they occupied when it was spoken. They looked in dumb astonishment at the principal actors in this unexpected scene. The spell was broken by Dr Guy rising from his seat.

'What mare was it?' asked Crawshay, turning sharply to Wrentham.

'The one I had from you.'

'And you were giving her high feed and nothing to do! . . . Humph! I used to think you knew something about horses.'

The yeoman rose with an expression of contempt and advanced to Philip.

'What's the matter, lad? Art sore hurt? It went against the grain to part with that mare; and I fervently wish she had eaten her head off at Willowmere, rather than she should have done this. I wouldn't have parted with her, neither, only I thought she was going into safe hands.'

'Get him into bed,' said Dr Guy decisively.

'For any sake, don't spoil the fun to-night,' said Philip feebly. 'My father will make some

excuse for me. I fancied I could hold out for a little longer; but it's no use.'

'Do not trouble yourself about that, Philip,' said Mr Hadleigh. 'Our friends here will say nothing to-night, and the young people shall enjoy themselves as if nothing had happened.'

'Thanks. Maybe I shall be able to come down before the fun is all over.'

Supported by Uncle Dick and Dr Guy, and followed by Dr Joy, Philip proceeded to his bedroom.

'This is most unfortunate,' muttered Wrentham, looking much distressed. 'I had no idea the brute would play such a trick.'

Mr Hadleigh apparently paid no attention to this. Taking his place at the table, he spoke quietly:

'You all heard what my son said, and I need not ask you to aid me in carrying out his wish. —Pass the wine, Mr Crowell.'

And so the crowd of young people who had been invited to the 'little dance' had no hint of the accident to mar their pleasure. Outside, the brilliant light shining through the canvas of the marquee contended for precedence with the ruddy harvest-moon. Inside, the place was like an illuminated hall of flowers and plants. Sam Culver and Pansy with assistants had been at work for two days here. The dresses, the wreaths, the feathers, the jewels of the girls and matrons, with their faces brightened by the excitement of the moment, formed a living kaleidoscope, as they moved and mingled in the dance or promenade. The strains of the band were heard in the village; and little groups of village lads and maidens hung around the gates of Ringsford to listen to the music.

'I suppose I must be Phil's deputy for a time here as well as in the house,' said Coutts in his suavest manner to Madge. 'I hope you don't mind very much?'

'I do mind a great deal,' she answered with a frankness which would have been rude in any one else, and yet in her appeared to be the kindliest answer to his question. 'But I suppose I must go through the first quadrille.'

And reluctantly she did so. When it was over, and Coutts would fain have retained his position as deputy, she said:

'Will you take me to Mr Hadleigh, please? He is there speaking to the vicar, near the entrance.'

Mr Hadleigh advanced to meet them, and she, relinquishing the arm of Coutts, took that of his father.

'She requires taming. Poor Phil,' was the reflection of the practical-minded Coutts, as he turned away to bestow his attentions on beauties who would appreciate them more.

Mr Hadleigh understood why she desired to speak to him, and they went outside, walking slowly across the lawn towards the house.

'There is no great danger,' he assured her at once; 'but he will probably be a prisoner for a few weeks. At present his chief idea is that we should say nothing about it.'

'I should like to see him—if the doctors will allow me,' she said after a brief pause, her head bowed as if she were studying the long shadows on the grass.

'We can ask them. . . . Are you sorry that he will not be able to go with the *Hertford Castle*?'

'How can I be otherwise?'

He did not speak for a few seconds—Then:

'You sometimes puzzle me very much, Miss Heathcote.'

'Why?' she asked, looking up, and the moon shone full on her face. His was in darkness.

'You seem to wish him to go away.'

'I have already explained,' she answered with a degree of constraint.

'Yes, I understand,' he said dreamily. 'Mine is a selfish way of considering the matter. I grudge every moment that what I—prize most, is out of sight. I suppose it is because we feel how short the time is we can possess our treasures, that in growing old we grow selfish.'

'But you are not an old man, Mr Hadleigh.' She was trying to find something gentle to say.

He shook his head.

'I know men who are nearly twice my age in years and yet are boys compared with me. I feel very old just now.'

'But you know his absence will not be long.'

'True—his absence will not be long. . . . Here is Dr Guy.—Well, doctor, what news do you bring us now?'

They had entered through the conservatory, and encountered the doctor on the way to seek his host.

'He has had a rest, and there is not much harm done. But it was foolish of him not to lie up at once and send for us.'

'Miss Heathcote would like to see him.'

'Well, it won't do him any harm for her to see him—especially as it is his wish that she should; but he ought to be kept as quiet as possible. I have been sent for; but Joy will stay as long as may be necessary.'

Mr Hadleigh himself took Madge to the door of Philip's room, and it was opened by Mrs Picton, the housekeeper.

'That's her now,' said Philip. He was lying on his right side on the bed, his back towards the door.—'Now, doctor, give us the ten minutes you promised.'

'I trust to you, Miss Heathcote,' said Dr Joy, 'not to allow him to move from his present position until I return; and not to let him speak too much.'

She bowed. The doctor and Mrs Picton left the room.

'Isn't this a nuisance, Madge?' began Philip, by an effort refraining from turning round to look at her. 'It upsets everything.'

'But there is no danger, Philip,' she answered, laying her hand soothingly on his head.

'That's just it—if it had been a real knock-up, one could have said, "There's no help for it," and settled down to enjoy a month or two in bed. But with a mere scratch like this, which only threatens to be troublesome if you don't behave yourself, it's—well, it's irritating.'

'What was it you wanted to say to me, Philip? You know, we have only a few minutes, and you heard what the doctor said to me.'

'O yes, of course. . . . Are they having a good time out there? . . . I can hear the music—there, they are at the Lancers now—and it makes my feet go in spite of me. I did hope to

have such a jolly time with you, Madge. I had put my name down for nearly every dance in the programme.'

'I am afraid we should both have been rather tired,' she said, smiling, glad to find him in such good spirits.

'The next dance is a waltz.—Ah!'

He had moved his arm incautiously, and a sharp pang reminded him of his condition. With that little cry he had uttered, Madge felt the pang too.

'I am going away now,' she said, trying to speak firmly; 'I am only doing you harm by staying.'

'No, no; don't go, Madge—the touch of your hand has done me more good than all their bandages. I will be quiet. There is something very particular you have to do for me. (What a capital band they have got.)'

'If you speak again about anything except what you want me to do, I shall leave the room.'

That quieted him, and he kept still for a little.

'I want you to write to Uncle Shield,' he said at length tranquilly. 'If you write to-morrow, it will be in time for the next mail.'

'What am I to say to him?'

'Say that I have attended to all his instructions, and have everything ready to start in the *Hertford Castle* on the sixth, and that I still hope to do so.'

'Oh, that isn't possible, Philip.'

'We'll see. Tell him next about this accident, which the doctors say will prevent me from getting on to my feet for some weeks. I hope to prove they are wrong; but send him this warning through you, so that he may not be disappointed.'

'Would it not be better that your father or your brother should send this message?'

'Not at all. He would not open a letter from either of them, as he has warned me; and they would not write one, as I know. I hope to set that old misunderstanding between my father and him right some day. Meanwhile, I very much want you to do this for me.'

'As you please, Philip.'

'Thanks, Madge, thanks. Then tell him particularly that Wrentham's affairs are all right. . . . He's a good fellow, Wrentham. You remember, I did not like him at first; since I have come to know him better, I have altered my opinion. He is a real good fellow, and made everything in this troublesome business quite smooth and easy for me. Only I wish he hadn't asked me to try that mare to-day, or that I hadn't been so unlucky as to agree to do it.'

'Uncle is very angry about it. He says the mare has been shamefully treated, for she had no vice at all when she left him, and he intends to buy her back.'

'I hope he won't. . . . Now let me see; was there anything else? No; I have told you all that I want to say. You will find an envelope with his full address on the table over there.'

As she was getting the envelope, there was a tap at the door.

'That's the doctor, I suppose,' muttered Philip disappointedly. 'Why, you can't have been five minutes here. You won't be worrying yourself about this, Madge. I'll be all right in a few days.'

'Don't speak any more,' she said, bending over and touching his somewhat feverish brow with her lips. 'I shall be here to-morrow. We are going home now. Good-night.'

Dr Joy was at the door, waiting to enter.

'Will you look at him, doctor, and tell me how he is before I go?' said Madge softly. The doctor went in, and after feeling his patient's pulse, returned.

'He has been a little excited. Don't leave for half an hour, and I will send a message to you.'

In half an hour Mrs Picton brought her the message: Philip was sleeping.

SOME PARLIAMENTARY MAIDEN SPEECHES.

THERE have probably been very few members of parliament who have risen in their place for the first time without an unpleasant nervous tremor. Even if a parliamentary neophyte be not, as the familiar phrase has it, 'unaccustomed to public speaking,' he has certainly been unaccustomed to such an audience; and to hear himself called upon by the Speaker to address the first legislative assembly in the world, is an ordeal which is none the less trying because it has been voluntarily courted. Seeing that in past times so large a number of those returned to parliament have been comparatively unpractised speakers, the fact that absolute break-downs in maiden speeches are rare must be attributed to the sympathetic encouragement which the House always accords to the new member. Audiences at St Stephen's are fastidious, but they are also kindly; the maiden speech which is a notorious failure is generally made such by over-confident fluency rather than by nervous hesitation; and, to mention one example only, Lord Beaconsfield's early *fiasco*, the story of which has been told a hundred times, was not due to nervous timidity, but to the ambition of a young and clever man, conscious of power, to achieve a parliamentary reputation by a single *coup*.

There are, of course, a few early failures on record which cannot be thus accounted for. The maiden speech of Sheridan, who was destined to become one of the greatest of British orators, was not exactly a break-down, but its escape from being such was very narrow. In Sheridan's case, the audience was more than usually sympathetic, for his literary reputation had excited curiosity and interest; but his indistinctness of utterance and hesitancy of manner impressed his hearers with the belief that, great as were his mental powers, he had not the physical qualifications for effective speech, and that—to quote the words of one verdict—'nature never intended him for an orator.' Woodfall, the celebrated parliamentary reporter, was fond of telling how, at the conclusion of his speech, Sheridan came up to him, and asked with evident anxiety what he thought of his first attempt. Woodfall's reply was: 'I am sorry to say I do not think this is your line; you had much better have stuck to your former pursuits.' This was discouraging; but Sheridan was not easily discouraged; and his subsequent career justified the confident boldness of his reply

to the depreciatory estimate: 'It is in me, however, and it shall come out!'

The failure of another distinguished man of letters, Joseph Addison, was much more complete. He sat for Malmesbury, in the House of Commons which was elected in 1708, and rose once to make a speech; but his diffidence completely silenced him, and he never made a second attempt. In the Irish parliament, where Lord Wharton's influence procured him a seat for the borough of Cavan, he made another failure, the story of which is told by Mr O'Flanagan, whom we quote at second-hand from Mr G. H. Jenning's *Anecdotal History of the British Parliament*, a capital compilation, to which we acknowledge a general indebtedness. 'On a motion before the House,' writes Mr O'Flanagan, 'Addison rose, and having said, "Mr Speaker, I conceive," paused, as if frightened by the sound of his own voice. He again commenced, "I conceive, Mr Speaker," when he stopped, until roused by cries of "Hear, hear," when he once more essayed with, "Sir, I conceive." Power of further utterance was denied, so he sat down amidst the scarcely suppressed laughter of his brother-members.'

The name of Addison recalls that of Steele; and one of the most interesting incidents in Steele's first brief parliamentary career was the maiden speech of his young friend Lord Finch, which began as a break-down, and ended as a success. In Queen Anne's time, shortly after Steele's election for Stockbridge, a motion was made to expel him from parliament, on the ground that in one of his periodical publications he had 'maliciously insinuated that the Protestant succession in the House of Hanover was in danger under Her Majesty's administration.' It so happened that very shortly before this time a libel directed against Lord Finch's sister had been scathingly denounced and exposed in Steele's paper the *Guardian;* and the young nobleman felt that he could not be silent when Steele in his turn was attacked. He leaped to his feet, determined to do his best; but though his heart was in the right place, he found it very difficult to get his words there, and after managing to get out a few confused sentences, he sat down, utterly discomfited. The failure would have been unredeemed, had it not been that as he resumed his seat he exclaimed: 'It is strange I cannot speak for this man, when I would readily fight for him.' The words were heard all over the House; and Lord Finch's audience, though hostile to Steele, was one which could be trusted to respond at once, the moment an appeal was made to its chivalrous instincts. From both sides of the House came a spontaneous burst of cheering, which so encouraged the young speaker, that he rose again to his feet; and this time made a telling and eloquent speech, which was the beginning of a successful parliamentary career.

Many years before the occurrence of this incident, another failure had been turned into a success by a happy thought on the part of the speaker himself, which proved that his break-down could hardly be attributed to want of presence of mind. During the latter part of the seventeenth century, a young man, who was afterwards to become celebrated as third Earl of Shaftesbury, and author of *Characteristics*, sat in the House of Commons as Lord Ashley. A bill was introduced to grant the services of counsel to prisoners tried for high-treason; and though the proposal was based on the commonest principles of justice, it found many and bitter opponents. Lord Ashley, however, was among its warmest supporters, and rose to argue in its defence; but, unfortunately, after saying a few words, he found himself unable to proceed. A little time was given him to collect his thoughts; but at last the patience of his hearers was exhausted, and they called loudly upon him to go on, when, looking at the Speaker, he said: 'If, sir, I, who rise only to give my opinion on the bill now depending, am so confounded that I am unable to express the least of what I proposed to say, what must the condition of that man be who, without any assistance, is pleading for his life, and is apprehensive of being deprived of it?' It may safely be said that the most elaborately prepared and eloquently delivered oration could hardly have been more rhetorically effective than this happily extemporised argument.

A record of oratorical triumphs is less entertaining than a record of failures; but the stories of one or two maiden speeches which owed their success to simple assurance are amusing enough. Modesty and timidity have not been characteristics of *all* the members who have ever sat in parliament. They do not, for example, seem to have been very prominent in Mr Lechmere, afterwards Lord Lechmere, who, on his election for Appleby, turned round to address the House immediately after having taken the oath, and before he had gone through the formality of taking his seat. Mr Cowper, made Lord Chancellor in 1707, was not quite so precipitate, but much more copious in his rhetorical outpourings, for he spoke three times during his first evening in the House; and even he was excelled by the notorious 'Orator Hunt,' who on a similar occasion gave his fellow-members no fewer than six samples of his peculiar eloquence. The hero of one of the amusing stories just referred to was the well-known Thomas Slingsby—generally shortened to Tom—Duncombe. The speech itself was an extraordinary affair, being an all-round attack upon various prominent statesmen, delivered in a manner which may be described as fascinatingly impudent; but the funniest thing about it was the story of its production, which has been told by Mr Greville. 'The history of Tom Duncombe and his speech,' says this collector of gossip, 'is instructive as well as amusing. Tommy came to Henry de Ros, and told him that his constituents at Hertford were very anxious that he should make a speech, but that he did not know what to say, and begged Henry to provide him with the necessary materials. He advised him to strike out something new; and having received his assurance that he should be able to recollect anything that he had learned by heart, and that he was not afraid of his courage failing, Henry composed for him the speech which Duncombe delivered.' What it was in this story which Mr Greville found instructive, is not so clear; but its amusing quality may be readily conceded.

Teetotalers have so many good anecdotes, that those who take the other side in the great alcoholic controversy have doubtless made the most of a

tremendous maiden speech which was delivered in the House of Lords in the year 1678 by the Lord Carnarvon of that period, and which was said to have been inspired entirely by claret. Lord Carnarvon had been dining, not wisely but too well, with the Duke of Buckingham; and the Duke, seeing his condition, induced him, by combination of raillery and flattery, to pledge himself to address his brother peers that night upon any subject they happened to be discussing. The Duke of course regarded the thing as a capital practical joke, and doubtless anticipated immense enjoyment from the flounderings of a half-intoxicated man, who had never spoken before, and who was not supposed to have any oratorical gifts even when sober. The debate was on the impeachment of the Earl of Danby, then Lord Treasurer; and as soon as an opening occurred, up rose Lord Carnarvon. 'My lords,' he said, 'I understand but little of Latin, but a good deal of English, and not a little of English history; from which I have learned the mischiefs of such kind of prosecutions as these, and the ill fate of the prosecutors. I could bring many instances, and those very ancient; but, my lords, I shall go no farther back than the latter end of Queen Elizabeth's reign, at which time the Earl of Essex was run down by Sir Walter Raleigh; and your lordships very well know what became of Sir Walter Raleigh. My Lord Bacon, he ran down Sir Walter Raleigh; and your lordships know what became of my Lord Bacon. The Duke of Buckingham, he ran down my Lord Bacon; and your lordships know what happened to the Duke of Buckingham. Sir Thomas Wentworth, afterwards Earl of Strafford, ran down the Duke of Buckingham; and you all know what became of him. Sir Harry Vane, he ran down the Earl of Strafford; and your lordships know what became of Sir Harry Vane. Chancellor Hyde, he ran down Sir Harry Vane; and your lordships know what became of the Chancellor. Sir Thomas Osbourn, now Earl of Danby, ran down Chancellor Hyde; but what will become of the Earl of Danby, your lordships best can tell. But let me see the man that dare run the Earl of Danby down, and we shall soon see what shall become of him.' The assembled peers must have felt as if they were being swept from their feet by an historical avalanche, riddled by a fusilade of facts; and the Duke of Buckingham could only exclaim: 'The claret has done the business!' And indeed it looks like it, for Lord Carnarvon never had another such success.

Of course, maiden speeches which are in any way memorable either for their matter or their manner, the greatness of their success or the completeness of their failure, are comparatively rare. As a rule, the first speech of any member in either House resembles closely all his succeeding speeches; it may lack the force and fluency given by practice, but in its general characteristics there is nothing exceptional. The able man shows at least something of his ability; the dull man lets his hearers into the secret of his dullness. When Cobbett, the very first night he sat in the House, began his maiden speech with the words, 'It appears to me that since I have been sitting here I have heard a great deal of vain and unprofitable conversation,' his fellow-members probably thought that here was a unique display of self-sufficient assurance; but when Cobbett had delivered his second speech, the first was unique no longer, and when he had spoken half a dozen times, it had come to be regarded as comparatively mild. Brougham and Canning, who both became parliamentary speakers of the first rank, may perhaps, with Sheridan and Disraeli, be considered as exceptions to the general rule just given, for their maiden speeches were described as failures; but in their cases, all that probably was meant by the word failure was that they did not fulfil the expectations which had been formed. None of Lord Palmerston's early speeches seem to have had the brilliance of his later utterances; but that he made a favourable impression at starting is proved by the fact that Mr Perceval offered him the Chancellorship of the Exchequer when he had only spoken once in the House; while Earl Grey, Lord Castlereagh, Lord Macaulay, and the late Lord Derby, who began their political careers in the House of Commons, delivered maiden speeches which immediately gave them a reputation.

During the last half-century, there has been such a change in the conditions of public life, that no maiden speech can excite the same curiosity as of old. One result of the lowering of the franchise has been to diminish the chances of any parliamentary candidate who has not some measure of ease and ability in speaking; and public meetings of all kinds are so numerous, that the quality and amount of oratorical talent possessed by every prominent man become well known long before he has a chance of displaying it upon the floor of the House of Commons. This change is not one to be regretted on the whole; but of course parliamentary life has lost one element of interest which it possessed in the days when a maiden speech might be looked forward to as a revelation of all kinds of unsuspected possibilities.

THE MINER'S PARTNER.

IN FOUR CHAPTERS.—CHAPTER II.

On a morning only a couple of days after the opening of our story, the sun had not yet risen high enough to strike the plains, which stretched as far as the eye could reach; but the mountains were all bright with his rays, from their peaks down almost to the 'foothills,' which, tolerable eminences in themselves, projected like so many capes out on the level ground, when a man came to the opening of a tent and looked out. Although he gazed across the rugged intervening ground and out upon the plain, and although sunrise in Colorado is worth seeing from a position of vantage, yet it was evident that it was from no appreciation of the scenery that the man stood there. From the spot, an irregular line of tents and huts—or 'shanties'—led to the centre of Flume City; while the trenches cut in all directions, and the odd implements and vessels lying about, gave ample evidence that this was a mining camp, or town.

The man was dressed in buckskin—as were many others, who by this time began to show

themselves—was tall and dark; of an eager, not to say cunning aspect; while from beneath his shapeless hat, his long hair hung straight and untidy. This description might serve for nine-tenths of the denizens of the camp, whether of high or low degree; but there was something in the aspect of this miner which would have prevented any expert from classing him with the lowest and coarsest of his calling. He was evidently deep in thought, and his meditation found support in a fashion very common in the United States—he drew a cake of tobacco from his pocket, and bit off a corner, as though it had been a biscuit; then, chewing vigorously, he remained with his absorbed gaze apparently fixed on the distant plains.

Presently the canvas of the tent was pushed aside, and another man came out. This second man was somewhat shorter than the first, although yet a tolerably tall man. He was fairer, as could be seen in spite of his sunburnt and weather-beaten countenance. His beard was brown, and was longer and fuller than the first comer's; and he was altogether of a thicker, stronger build. These brief descriptions will serve to introduce the two partners Rube Steele and Ben, whose jarring took up so much time at the miners' convention two or three nights before, and whose relation to the whole camp had grown to be of the most unfriendly character.

'How long have you been cooling yourself here?' asked the second man, who was of course Ben; 'and why did you not wake me up?'

'Reckon I have not been here six minutes,' replied the other, taking no notice of the second query. 'I expect we had better see now about fixing the breakfast.'

'You might have done something, instead of loafing around,' muttered Ben, who was clearly in no pleasant mood, although his features bespoke him a frank, good-tempered fellow enough. 'Here! I will light the fire.'

In a few minutes the fire was blazing, the kettle on, and the men, who had scarcely interchanged another word, were seated, waiting for the water to boil.

'Now, Rube,' suddenly exclaimed Ben, 'you know this is my last day here; I mean clearing out; so this is our time to have a settlement. If we don't fix things straight now, we shall not fix them at all.'

'They air fixed, ain't they?' retorted Rube. 'You have done considerable as you please; so, if you don't like the position, I can't help it.'

'You shift too much in your argyment, you do,' continued Ben. 'But say now, right away, do you mean to pay me those fifteen hundred dollars or not?'

'You air unreasonable altogether,' returned Rube. 'Why should I pay fifteen hundred dollars, because a man who robbed us both has gone off with twice as much?'

'Don't tell me about robbing us both—you can't fool me like that!' angrily exclaimed the other. 'I never would trust the man with dust—you knew it—although he was your friend, and you could not say enough in his favour. It was through you he hung around here; and even if you did not get your half from him, with a big profit, you are bound in honour to pay me my share.'

Rube's eyes assumed for a moment a very ugly and dangerous look, as his comrade spoke. 'Seems to me, pardner Ben,' he said, 'that you are gone wrong altogether in this connection. Two or three citizens saw the order, and thought it was in your writing; so did I. Then where does the blame come in? Fix it how you like, it was only a mistake, not a fault. And as to my having shared the plunder with this stranger'——

'I can't say you did for certain, of course,' interrupted Ben. 'But you have been out of camp till midnight ever since, and where have you been all the time? Anyhow, I am fifteen hundred dollars short; that is a sure thing, and I want it made up. And what do you mean to do about it?'

The altercation seemed likely to grow into a violent quarrel; but one or two miners from the neighbouring huts came in on matters of business, and the dispute died out, leaving, however, to judge from the countenances of the principals, no great amount of good-will on either side. It was evident from the conversation of these visitors, that as Ben was about to leave the camp, and as the partnership which had existed between himself and Rube would of necessity cease, they had resolved to sell their equipment of tools, mining 'fixings,' and tent furniture, all of which were known to be very complete. This was what drew the miners to the tent; and among the visitors, there was a general understanding that the partners were not separating on good terms; indeed, most of those who came showed, by their addressing themselves almost exclusively to one or the other, a partisanship in the matter. Various bargains were struck by either partner; but whatever was done by Ben invariably produced unfavourable comment from Rube; while Ben did not attempt to conceal his dislike of nearly all transactions managed by his partner.

So the day wore on, with no increase of good-will in the tent; and the interchange of conversation grew less and less, while it became more irritating in its tone. Had the men remained together all day, a quarrel must certainly have arisen; but this was not the case, one or other being absent from the tent for the greater part of the time.

It was while Rube was absent towards the close of the afternoon, that a miner drew near to the tent, and from the repeated glances he threw around him, and the deliberate manner in which he approached, he seemed to be on his guard against some danger. At last, when he was very close to the tent, Ben came to the opening, and being busied in arranging some of the household gear which he was removing from the interior, would not have noticed this new-comer, but that the latter, in a lower voice than appeared to be requisite, exclaimed: 'Ben! hist! Are you alone, Ben?'

Ben looked up, and apparently recognised the man, for he smiled as he replied: 'Yes, Absalom, I am alone; and quite at your service, if you want me upon any business.'

The stranger was a little spare man, with a sufficiently comical cast of features; yet he did not respond to Ben's smile, but with a very grave face, came closer.

'Why, Absalom!' exclaimed Ben with a grin of amusement spreading over his face, as he noticed the little man's gravity, 'what is the matter now? Been playing at "monté" again, I suppose?'

This allusion to the gambling weakness which was known to be a feature in poor Absalom's character, also failed to diminish the serious cast of the little man's countenance.

'Let us go into the tent and talk,' said the stranger, still without any responsive smile on his lips; and as, with the freedom of camp-life, he led the way, Ben followed him, wondering and smiling still at Absalom's important air.

'Now, then, Ab,' he continued, 'what is it? Let us have your news first; then we will take a drink.'

'Do you know that Bill Dobell is in camp?' asked Absalom, putting more mystery and importance into his manner than before.

'No; I guess I did not know it,' replied Ben. 'If so, he had better clear out soon; or before I go, I will leave a message which will send a dozen of the boys after him, and will teach him that the Vigilantes are not dead yet.'

'It will be too late,' said the other.—'Now tell me, Ben, has not Indian Peter offered to buy the mules and wagon that you have in Fandango Gulch? And are you not to meet him there at sundown to settle the trade?'

'Certainly,' replied Ben, still wondering, but with much less disposition to smile. The little man's earnestness had impressed him, and he, moreover, began to regard the conjunction of names as ominous.

'Well, then, Ben,' continued Absalom, glancing nervously around him and dropping his voice to a whisper, 'it is all a planned thing with Rube, your pardner, and these other two. You will go to Fandango Gulch; but you will never leave it alive! Bill Dobell is to have five hundred dollars in gold-dust for shooting you; and Indian Peter is to have something for trapping you down there.'

'And Rube?' asked Ben, in a voice which told how far he was from doubting this strange story.

'Wal, Rube of course is to be the paymaster. He says you have a sight of plunder in—in those two valises,' said Absalom, pointing to a couple of old but strong travelling-bags in a corner of the tent. 'You know best if he is right.'

'How do you know all this?' demanded Ben sternly.

'I have been having drinks with the boys at Rattlesnake Claim,' returned Absalom, 'and so have not gone to my own shanty lately. You know that is a long way outside the city. Two nights ago, I slept at Big Donald's. Last night, I felt real bad, and so I got into Indian Peter's shanty. I thought he had left the camp for a day or two, so I crept under some buffalo robes to have my sleep. I was woke by some men talking, and I was about to crawl out, when I recognised Bill Dobell's voice; and you know he has threatened to shoot me at sight, for telling how he broke the stamp-mill. So I lay low, and heard Rube settle with them other two. Of course I made up my mind to tell you, and have been hanging around here all day to get a chance of seeing you by yourself. And it is my belief, Ben, that Rube met Californy Jones on the night that scallawag went off with your gold-dust.'

'I feel considerable certain he did,' returned Ben; 'and I have told Rube as much.'

'I saw Rube meet a man at the Big Loaf Rock, in the cañon,' continued Absalom. 'I knew the man somewhere, but could not remember him at the time, and I only saw his back. He had a dog with him too, which was a good deal on the growl, so I daren't go nigh.' And here Absalom detailed the adventure with which the reader has been made acquainted.

'Bill Dobell in camp! Rube in league with him and Indian Peter! and Californy Jones hanging about the cañon!' exclaimed Ben. 'Then my first suspicion was right, and Rube *did* send some men into the cañon to shoot me! I thought he was a long time getting his posse together; and a pretty collection they were! He had plenty of time to send his desperadoes on first, and they were Dobell and Indian Peter, you bet.'

'I think it's very likely,' returned Absalom; 'for Rube is a bad man; and if he ever knows what I have told you to-day, he will mark me.'

'All right, Absalom. The span of mules and the wagon in Fandango Gulch are yours; you can fetch them in the morning. I reckon Rube won't interfere with you then,' said Ben. 'It is near sundown now; so do you clear out, and send Van Boldvert from Pennsylvania Claim up here, and the Englishmen from Happy Jack Gulch. Go quickly.'

The little miner vanished; and Ben waited until the arrival of the men whom he had summoned, casting many a glance meanwhile in the direction from which his treacherous partner should appear.

Looking out westward across the plains, the broad red disc of the sun was seen just touching the horizon, and everything bathed in his last rays was golden, yet not dazzlingly bright. A peculiar softness and repose was in the light of the setting orb. It was almost the time at which he was to keep his appointment; so, when the men arrived, wondering at the urgent summons delivered, he hastily told them the gist of the information he had received, and suggested that some steps should be taken to get rid of Bill Dobell, who was acknowledged to be the most desperate ruffian of all who infested the mines.

Van Boldvert, who, with all the phlegm and external apathy of the genuine Pennsylvanian Dutchmen, had their quiet resolution too, said a few words indicative of the treatment he intended to adopt—a process which boded no good either to Dobell or his accomplice Indian Peter.

'And how about Rube?' said one of the Englishmen from Happy Jack Gulch. 'What is to be done with him? It seems to me that he is the worst of the lot; and if there is to be any stringing-up, why, string him up first, *I* say.'

'You sees how it is,' responded the Dutchman. 'Rube is de vorst; dere is not no doubt about dat; but he has had a good character as yet, and so far as the miners knows, it is his first offence. So ve shall shust varn him off; and if he comes more closer nor sixty miles to dese diggings, ve shtrings him up. But dese oders—vell, dey are shust de two vorse men ve ever had here, and ve settles dem anyhow.'

As it was Ben's own case, it was thought better that the Vigilantes should work without him. Had they decided otherwise, not his intended departure or anything else would have been allowed to stand in the way; on forfeit of his own life, he must have accompanied them.

The visitors disappeared; and so short a time had the conference occupied, that the last rays of the sun still brightened the evening clouds, when Ben saw, from the door of his tent, fourteen or fifteen men leave the city, and stealthily and in several parties take the line which he well knew would lead them to Fandango Gulch, where the treacherous ambush was to have been set for him.

Taking with him the two valises to which Absalom had made so startling a reference, Ben strode across to a hut, mean-looking enough, but which was somewhat larger than common, and which was dignified by the words 'Bank, Post-office, Mail Depôt,' being inscribed on boards as large as the front and sides of the building would conveniently hold. Having deposited his luggage with the clerk, he was about to return to his own tent, when he muttered: 'I will have a last look at the old place;' then turning at once into one of the numerous ravines which ran close up to the town, he was speedily at the foot of the low hills; and a few score yards, easily threaded by him, amid the intricacies of trenches, mounds, and pools, brought him to the scene of his last speculations.

The moon was rising. It is hardly possible to say so much without adding that it had risen, as the full-moon, of a size and splendour not seen in northern climates, would rise there completely in five minutes; while its light, although softer and less penetrating than it would be when the disc was high in the heavens, was enough to render even the smallest objects visible.

'I guess there is a deal more metal in this placer than has ever come out,' half-murmured Ben, as he looked at the spot; 'and I am leaving a good thing. But it is all for the best. I have realised more dollars than I shall ever spend, and I am not so young as I was; and some of the people here are getting a little tired of me. That p'isonous Rube was the first, maybe; but he would not be the last, if I stayed here, to try how thick my skin is. And I remember that, more 'n a month ago, a bullet was sent through my hair by accident. There would be another such accident soon, I reckon, and as before, no one could guess whose bullet it might be. Wal, this is the last time I shall take a survey of this or any other mine. The water is high to-night.' He turned, as he spoke, to look at the pool by which he was standing; but as he did so, he suddenly ceased his speech, and instinctively recoiled.

The pool was a little below where he stood—only some two or three feet; but a kind of beach or margin lay between him and the water; and as he turned round, the figure of a man, coming from behind a mound of earth, which lay on this margin like a small cliff, emerged into the full moonlight. The start and broken exclamation of Ben were repeated by the other.

'Wal, is that Ben?' exclaimed the voice of Rube. 'Why, hadn't you got to meet Indian Peter at the Gulch, to settle about them mules?'

'Yes,' returned Ben briefly; 'I had.'

'Ha! you have not been, I estimate,' continued Rube. 'Is the trade off?'

'I have sent some friends to transact my share of the business for me,' said Ben; and either the ambiguous character of the reply, or its tone, roused Rube's suspicions; for he glanced quickly up at the speaker, with the same cunning, dangerous look which his face had worn earlier in the day.

'I see there 's a good many handles and broken tools about here, Ben,' he said, changing the subject. 'Before I take another pardner, I shall have a clearing-up.'

'I think it 's very likely,' said Ben drily, and his tone again caused the quick, dangerous look to come on Rube's face. The latter had by this time approached almost to where Ben stood, and he turned to look, as it seemed, across the pool and out over the deserted diggings, to the rising moon; but as he did so, with an almost imperceptible movement he brought his revolver further to the front. To any but a practised eye, the movement would have been entirely concealed; but Ben saw it, and knew its meaning.

'Air you going to Fandango Gulch, Ben?' asked Rube, turning again to his ex-partner. 'I reckon Peter will be considerably riled if you don't.'

'As you say, there 's a sight of useful things lying about here,' returned Ben, stooping, and looking at some of the broken implements; 'and I had no idea we had left so much. Indian Peter won't miss me.'

'Ain't you going to meet him, then, and why?' demanded Rube, with another sinister glance upward, and another slight hitch forward of his scabbard—as revolver holsters are usually termed in the west.

'Because Indian Peter is in the hands of the Vigilantes by this time, you traitor and hound!' burst forth Ben, his smothered passion appearing to overcome him. 'So is Bill Dobell; and so'——

His sentence was never finished, for both men dashed savagely at each other at the same moment. Rube, when he heard the words which told him that his plot was discovered and defeated, with a bitter oath jerked his pistol from its scabbard, cocked, and fired; but though he did it almost instantaneously, the hawk-eye of Ben was too quick for him, and the aim, which must have been deadly, so close were they together, was balked by a powerful stroke with the handle of a pick, which Ben had secured under the feint of examining the refuse implements. As Rube levelled his pistol, Ben dealt him a desperate blow on the back of the head. The weapon exploded harmlessly in the air; and Rube, with a single groan, stumbled forward and fell senseless and motionless on his face.

He lay on the margin or beach described as being between the elevated ledge and the pool; and there was something in the helpless, inanimate figure which convinced Ben that his stroke had taken deadly effect.

'I believe he is dead,' he said, after a pause, during which he grasped his club in readiness for another blow. 'I was sorry I had left my six-shooter behind, when I saw what he was after; but this has done as well. Let me make sure.'

He lifted up the prostrate man's arm; and when he released it, it fell heavily and clod-like, just as it was dropped. He turned the body half round and placed his hand over the heart, but could feel no pulsation.

'The Vigilantes have been saved some trouble, either now or at another time, anyhow,' he continued. 'I hope they have caught Indian Peter and Bill Dobell, and then the camp has got quit of the three worst characters in it. I shall say nothing about this before I clear out. I have so many dollars in my satchels, that a very little would serve as an excuse to Rube's friends for lynching me.'

Acting on this determination, he quietly returned to the camp, or city, where he soon learned that justice had overtaken Bill Dobell and Indian Peter. In further confirmation, the driver of the mail, as he drove from the town, some hours later in the night, showed him, as an object of interest, two figures pendent from the boughs of a solitary tree some hundred and fifty yards from the roadside, which tree had, it appeared, often served such a purpose before.

The driver, having come on from a distant station with the coach, was not so well acquainted with the antecedent particulars of this demonstration of justice, as was the passenger who sat by his side on the box; nor did he know the latter's interest in the matter.

'I do hear,' continued the driver, 'that Rube Steele was looked for to make a third; but it is calculated he made tracks in time. It is a good thing to get rid of such desperadoes as Bill Dobell and Indian Peter; but it's an awful pity they missed Rube.'

The outside passenger kept his own counsel, being very well satisfied that his partner's fate should remain unknown until he had placed at least a hundred leagues between himself and the mining town.

CONCERNING LOVE.

IN TWO PARTS.—PART I.

Love is a stupendous paradox. You cannot elaborate a theory with regard to it which shall be at once entirely consistent in itself and all-comprehensive in its application. You may note its manifestations, estimate its force, trace its progress, and speculate upon its potentialities; but how can you hope to reduce to a self-consistent philosophy its thousand-and-one contrarieties and its endless shades of diversity—its glowing triumphs, its merry comedies, its sad irrevocable catastrophes—its sweet reasonableness, its wild infatuation, and its incomprehensible eccentricities? There is perhaps no subject under the sun which has been a more constant theme of poets, essayists, and philosophers; but what is the net result of all that these have told us? It is a long category of heterogeneous and conflicting dicta or speculations, comprising, it is true, many sage reflections, accurate observations, and charming fancies, but, as a whole, presenting rather the aspect of a kaleidoscopic view than that of an intelligible and harmonious picture.

Though the praise of love has been more common than its disparagement, there are not wanting those who have been disposed to treat the subject with irony and ridicule. It was Laurence Sterne who said that the expression 'fall in love' evidently showed love to be beneath a man. This was no doubt intended for nothing more than a facetious play upon the words; but there are numerous writers, both before and after Sterne, who have ridiculed the votaries of the tender passion and disparaged the god Cupid. Bacon speaks of love as 'this weak passion,' and quotes with approval the remark, that 'it is impossible to love and be wise.' Cervantes satirises the extravagances of the amorous passion to the top of his bent in the adventures of his mad hero Don Quixote, in whose fantasy and mock-heroic panegyrics love is a never-absent theme; indeed, it is an essential element of his madness, for he is made to declare that 'the knight-errant that is loveless resembles a tree that wants leaves and fruit, or a body without a soul.'

Certain of Shakspeare's creations also join in this detraction, and the lover and the lunatic are placed in the same category, as—with the poet—'of imagination all compact;' while one of his characters—the fair Rosalind—declares: 'Love is merely a madness; and, I tell you, deserves as well a dark house and a whip as madmen do.' The affinity of love and madness has formed the subject of much learned disquisition, and the general testimony would seem to show that there must be numerous instances in which it might be said, adapting Dryden's couplet on the subject of 'great wits:'

> Great love is sure to madness near allied,
> And thin partitions do the bounds divide.

Carlyle remarks that 'love is not altogether a delirium; yet it has many points in common therewith.' From the illustrations that are constantly set before us, it would appear that the chief point in common between love and madness or delirium is that in both cases the victim becomes more or less devoid of the power of self-control, and, in his or her infatuation, indulges in the most serious or ludicrous extravagances.

The evidence would seem to indicate that Reason, in the presence of Love, is obliged to descend from her throne, and pay tribute to what has become the dominating motive. When Love takes possession, it subsidises and controls the judgment, tastes, faculties, and inclinations of the individual, and is not to be argued down, even by the subject himself, much less by others. In the words of Addison:

> Love is not to be reasoned down, or lost
> In high ambition, or a thirst of greatness;
> 'Tis second life—it grows into the soul,
> Warms every vein, and beats in every pulse.

From whatever point of view we approach this theme, we soon encounter what is, perhaps, after all, the most prominent and least dubitable characteristic of love—namely, its far-reaching, all-pervading potency. Bacon, with all his philosophical acumen, is obviously wrong when he describes love as a 'weak passion;' indeed, the phrase itself is a contradiction in terms. Voltaire is much more just in his estimate when he says: 'Love is the strongest of all the passions, because it attacks at once the head, the heart, and the body.'

What Bacon evidently intended to refer to was

the weakness, not of the passion, but of the will which could not repel or subdue it. This view is borne out by the context, which is, that 'great spirits and great business do keep out this weak passion.' This contention, however, is no more tenable than his characterisation. All the evidence goes to prove that love is not to be conquered by great spirits, or smothered by great business, any more than it is to be reasoned down. As the French proverb says: 'Close the door in Love's face, and he will leap in at the window;' and the aphorism is equally applicable to mental and material obstructions. In the same way Shakspeare teaches that 'stony limits cannot hold love out;' that 'the more thou dam'st it up, the more it burns;' and that 'Love is your master, for he masters you.'

There is, indeed, no aspect of this passion regarding which so great unanimity prevails as that expressed in those last quotations. It is Scott who declares that

> He who stems a stream with sand,
> And fetters flame with flaxen band,
> Has yet a harder task to prove,
> By firm resolve to conquer Love.

Southey, who is convinced that 'love is indestructible,' goes so far as to assert that

> They sin who tell us Love can die.

If further evidence of the vitality and power of this passion were required, an appeal might be made to the language of Hebrew Scripture, which teaches that 'Love is strong as death . . . Many waters cannot quench love, neither can floods drown it.'

In view of testimony like this, one might be pardoned for supposing the point in question satisfactorily established. We shall not, however, have proceeded far in the consideration of other phases of the subject, before we shall come upon views which it is by no means easy to reconcile with the above conclusions. Take, for example, the theory that a man or a woman can truly love but once. This would seem to be the natural corollary of the belief that love is indestructible. The argument, of course, is that the love which departs is not love at all. As the old lines run:

> Pray, how comes Love?
> It comes unsought, unsent.
> Pray, how goes Love?
> That was not love that went.

Carlyle homologates this view. In *Sartor Resartus*, he says: 'As your Congreve needs a new case or wrappage for every new rocket, so each human heart can properly exhibit but one love, if even one; the "first love which is infinite" can be followed by no second like unto it.'

This is certainly a strong case for the first-and-only-love theory. But let it not be supposed that we shall here miss the inevitable differences of opinion. Among others who raise a strong protest against this view is George Eliot, who believes there is a second love which is greater, because more mature, than the first. 'How is it,' she asks, 'that the poets have said so many fine things about our first love, and so few about our later love? Are their first poems the best? or are not those the best which come from their fuller thought, their larger experience, their deep-rooted affections? The boy's flute-like voice has its own spring charm; but the man should yield a richer, deeper music.' Many other quotations to a similar purport might be given; but the whole argument is a futile one. It is simply reasoning in a circle, because, whatever may be advanced on this side of the question, it is of course perfectly open to those who maintain the opposite to fall back upon the contention that the love which was vanquished was not love at all, and that its subjugation sufficiently proves that it was spurious.

It may be said that this is a somewhat rough-and-ready method of disposing of a profound and delicate psychological problem, and the point may be further raised in connection with the kindred proposition, that love is not incurable. Those who hold that love is indestructible must also, in consistency, maintain that it is likewise incurable, and inconsolable when scorned and rejected. Then, of course, they are met with declarations like that of Shakspeare when he says: 'Men have died from time to time, and worms have eaten them, but not for love;' or like that of Thackeray, when he remarks that 'Young ladies have been crossed in love, and have had their sufferings, their frantic moments of grief and tears, their wakeful nights, and so forth; but it is only in very sentimental novels that people occupy themselves perpetually with this passion; and, I believe, what are called broken hearts are very rare articles indeed.'

At the same time, there are not many who agree that

> 'Tis better to have loved and lost,
> Than never to have loved at all.

Guarini, in his *Faithful Shepherd*, expresses a directly opposite opinion, holding that it is far harder to lose his lady-love than never to have seen her or called her his own. Hamlet speaks heavily enough of 'the pangs of despised love;' and it would be idle to deny that a large proportion of the tragedies of real life, as well as of fiction, have turned upon love rejected, abused, or betrayed. When Dryden says that

> Pains of love be sweeter far
> Than all other pleasures are,

he must not be supposed to refer to the love that has been blighted by cold neglect or open disdain. Burns describes the pains of love when parted from its object in very different language—as 'A woe that no mortal can cure.' Dryden's reflection is rather in the same strain as that of the love-sick Hibernian who said it was 'a moighty recreation to be dying of love. It sets the heart aching so delicately there 's no taking a wink of sleep for the pleasure of the pain.' Moore gives a less paradoxical and more serious exposition of the case than his love-sick compatriot:

> Yes—loving is a painful thrill,
> And not to love more painful still;
> But surely 'tis the worst of pain
> To love and not be loved again.

Various specifics have been prescribed for the cure of love, and among these, matrimony has been suggested as an infallible cure. A grim joke, my masters! but one in which there is only a certain modicum of truth. Whether, because

the love is spurious, or because its fire is less unquenchable than the poets would have us believe, it is yet too true, and one of the saddest facts of human experience, that the love which glows so bright and radiant on the wedding morn, may, before many years have flown, be cold and dead as the ashes of a fire that has long gone out.

When the idol is shattered, and love neither dies nor breaks the heart, it sometimes—and here is another enigma—changes its nature; becomes, in fact, the opposite of itself. The operation is not without analogy. The arch-fiend himself was once an angel of light, and so we may find adoring love become venomous hate.

It is a profitless task to apply the why and the wherefore to love-affairs. Byron, who himself knew so much about love, says:

> Why did she love him? Curious fool, be still;
> Is human love the growth of human will?

To assume that it is, would only remove the problem still further from the point of solution, and would seem, in many instances, to bring the lover and the madman into still closer relationships. It is the infatuation of love, and not the prompting of reason, that causes men and women—but how much more frequently the latter!—to give up, often for a worthless object, friends, happiness, reputation, wealth, and all that life holds dear—even, in some cases, life itself. 'The hind,' says Shakspeare, 'that would be mated with the lion, must die for love;' yet such unions and such sacrifices are by no means uncommon—not in the lower animal kingdom, but in the more exalted and more tangled scheme of human affairs. Still, despot as he is, with all his huge blunders and strange tyrannies, Love is perhaps the most welcome and beneficent guest that knocks at the door of the human heart. Reason has her own place and her own functions; but it is to Love, after all, that we must look for the most generous impulses, the noblest inspirations. It is Love that redeems our life from cold prosaic dullness, that sweetens and enriches all its springs. There is no more refining and ennobling influence in the life of man than that of a pure unselfish love. From such flows every kind of mutual sympathy, mutual comfort, mutual helpfulness. It is the highest realisation of human bliss.

A NEW PROCESS OF WHITE-LEAD MANUFACTURE.

In two former articles (June 16 and November 10, 1883) we noticed the dangers to life and health which accompany the manufacture of white-lead as at present carried on, and we reviewed the several attempts made to find a substitute. We are still of opinion that such substitutes will prove effectual in their measure; but we cannot shut our eyes to the fact that the enormous production and consumption of ordinary white-lead must nevertheless continue, chiefly on account of its cheapness, for its enduring qualities, and for its capability for purposes in jointing, calking, machinery and hydraulic use, which other substances fail to fulfil. In these circumstances it is interesting to know that almost coincident with the Report of Mr Redgrave, C.B., Her Majesty's chief Inspector of Factories—to which we alluded in a former article (June 16), and which so forcibly shows the evils under the old 'stack' process of white-lead manufacture, as usually carried on—there has been discovered, and brought into full operation, a process by which white-lead of the purest and best quality is produced in one-sixth the time, and at considerably less cost than under the old process. The necessity for the work of women is also avoided, and the operatives completely secured from contact with the dangerous white-lead dust.

It may help our readers to an understanding of the subject if we quote first a brief description of the 'stack' process, from a *previous* Report by Mr Redgrave: 'The lead is received in "pigs." These are melted in a furnace, and then cast in water or in moulds of various forms best suited for the action of the acetic acid. The acid is placed in pots of earthenware, on which the moulded lead is placed; and the pots are then arranged in large chambers, called "stacks," and covered with tan. Row after row of pots and tan are placed one above the other, until the stack is full, in which condition the stack remains for about three months. Carbonic acid gas is evolved during this time, escaping through the ventilators, and causes the deposit of white-lead on the moulds of lead. If the above were the only process, it would be comparatively innocuous; but it is the work that succeeds from which the evil of lead-poisoning arises. The tan is carefully removed from layer after layer; white-lead is found caked upon the moulds of lead; but a very little motion causes it to break up into powder. The lead, loaded with this deposit, is then carried in trays, and emptied into cisterns of water, through which, by agitation, the white-lead passes to the grinding-mills, and the blue lead is raked out of the cisterns for further use. After being ground in the wet state, the material is placed in pans and carried into the ovens to be dried; it is then carried from the ovens to the warehouse, to be packed in barrels. Such are the principal processes in which females are employed, and which are most prolific of disease and death. The injuries to health arise from the external contact with the skin of the white-lead, whether in the dry or moist condition, and the inhalation of the dust or powder into the lungs, or its being imbibed into the stomach through the mouth. As for the prevention, external or internal, no means have yet been discovered by which this could be attained. The mitigation of the evil lies in excessive and enforced cleanliness, with the use of special clothing and appliances when at work.'

When, however, the testimony given in Mr Redgrave's *later* Report is considered, it will be seen that the 'excessive and enforced cleanliness, with the use of special clothing and appliances,' fail to accomplish their object, the chief reason being, as testified by one sufferer: 'The air of the factory was always full of white-lead dust.' Another, speaking of her clothes, said: 'Dust came from them like a miller, and used nearly to choke me.' And managers of factories state to Mr Redgrave: 'Respirators are provided, but workpeople as a rule will not wear them. The respirators are troublesome.' The fact is, there is this dilemma: without the respirators, lungs and

stomach get filled with the dangerous white-lead dust; with the respirators, the perspiring, half-choked women cannot work. The problem really is how to produce white-lead without raising this poisonous dust, as it is well known that the grinding in oil is with any ordinary care perfectly innocuous. The very stringent legislation lately authorised does not touch this point.

Attempts have been made to produce white-lead by precipitation, and thus to avoid some of the dangers; but the product is an inferior one, being composed of minute crystals which will not blend with the oil, and are deficient in the most important qualities necessary for paint, and for the other purposes for which true white-lead is largely used. The precipitated lead has also to be washed and stored, as the white-lead from the stack process.

Happily, just at this juncture a simple but wonderful process has been discovered, perfected and patented by Professor E. V. Gardner, of 44 Berners Street, London, W., for many years Director of the Scientific Department, and Professor of Chemistry to the Royal Polytechnic Institution, and who marches with the age in the application of the wonderful power of electricity to this branch of manufacture. He avails himself to the full of that great representative of all energy in forming what is called a galvano-electric combination in the process of manufacture of white-lead, as follows:

The metallic lead, cast into the form of gratings, and bent into narrow arches, is closely ranged in order upon wooden trays covered with pure sheet-tin—the most practically useful electro-negative to be had. Dipped by mechanical contrivance into a certain acid mixture, to give a chemically clean surface, and to promote the after-process of corrosion, they are placed in chambers built of brick, from twelve feet square and upwards, having a glass roof and windows for observation, and having a floor of the electro-negative and highly electro-conductive tin heated from beneath by steam to the necessary temperature of about one hundred and twenty degrees Fahrenheit. These chambers may each contain as small a quantity as from eight to ten tons of lead, and range up to eight hundred or a thousand tons. Gases, composed of a mixture of acetic acid vapour and atmospheric air at a similar temperature, are introduced by stoneware pipes from an ingenious apparatus where they are generated; and passing through holes in the pipes a few inches from the tin-covered floor of the chamber, they pass upward, and permeating the whole chamber, electric action commences. At the end of the second day, there is a beautifully white surface. On the third day, carbonic acid vapour is introduced by the same means, hastening still more the formation of white-lead. This goes on for two weeks, at the close of which time, so active has been the action of the substances engaged, by reason of the electrical energy, that there is more white-lead formed than under three months' working of the same amount of lead by the old process. The gases are then shut off, the chamber cooled, ventilated, opened, and the contents withdrawn, the trays being emptied through a special hopper into the 'agitator,' a horizontal cage of round iron bars revolving in a closed case. After being rotated a few minutes, the whole of the white-lead is disengaged, and falls into a pit underneath, leaving the cores that have not been converted in the cage, from which they are collected and remelted for further use. From the pit, the white-lead is conveyed to the mill by an endless band, on which are fixed a number of small buckets, which, filling themselves with the white-lead as they pass through the pit at the bottom, discharge it into the mill as they turn over at the top, whence, after passing through the crushing-rollers, the white-lead falls into the mixer, and issues forth, when combined with oil, in the shape of white-lead of one unfailing quality, being of perfect character as to body and testing powers, and of the purest colour.

The work is continuous from first to last. As all the apparatus is carefully closed in, there is no dust, nor do the hands of the operatives once touch the material. *The Sanitary Record* (October 1883) says: 'Professor Gardner has completely revolutionised the manufacture of white-lead. Not only has he rendered it a comparatively innocuous industry, but he has made it a much simpler process, and reduced the time hitherto required for its production in an extraordinary manner, and so facilitated its rapid make, and at a much lessened cost of production. But these great advantages of the process sink into insignificance when compared with its hygienic working in rescuing hundreds of poor creatures from lingering illness, not taking into account the attendant expense of their treatment and support, which falls on various local authorities.'

Mr Redgrave, having carefully inspected the working of the process, has written to Professor Gardner as follows: 'I think it right to state that having carefully inspected your works at the bottom of Rolt Street, Deptford, it appears to me that the process of the manufacture of white-lead there is free from nearly all the objections on the score of exposure of the persons employed to the injurious effects, hitherto deemed to be inseparable from the occupation. The material and the product are alike isolated, there is an absence of dust, and handling or manipulating is unnecessary.'

As the white-lead manufacturers of our country are not only an influential and wealthy body, alive to their own interest, but also most anxious for the welfare of their operatives, they must hail this new process with much interest, and adopt it gladly. The general public will rejoice to be assured that the valuable and useful white-lead is no longer prepared at the cost of life and health to many, especially women, as has hitherto been the case.

THE SENSITIVE PLANT.

THE singular phenomenon exhibited by this well-known exotic has long been the admiration of the curious, a puzzle to the botanist, and a standing marvel in the vegetable kingdom. The plant has the property of contracting certain parts of its structure when touched, and is not only sensible to the application of force, but appears to be influenced by the surrounding elements. Sudden degrees of heat or cold, steam from boiling water, sulphur-fumes, the odour of volatile liquids, in fact anything that affects the nerves of animals, appears also to affect the sensitive plant. It is

in the highest degree a nervous subject, and, like that species of the genus *homo*, is in this country a thorough hothouse habitant. The subject of our present consideration was originally introduced from Brazil, and, along with other varieties possessing the same faculty in different degrees, is common to other parts of South America. The stem of the plant is cylindrical, and of a green or purplish colour, with two spines at the base of each leaf, besides a few others scattered about the branches. The leaves are pinnatifid, or divided into pairs, supported on long footstalks, and each pinnule is furnished with fifteen or twenty pairs of oblong, narrow, and shining leaflets. From the base of the leaf-stalks proceed the peduncles or flower-stalks, each of which supports a bunch of very small white or flesh-coloured flowers. The seed-vessels are united in packets of twelve or fifteen each, and are edged with minute spines, each husk containing three little seeds.

Dr Hook, Dufay, Duhamel, and other naturalists, have studied this plant with equal attention, and from their observations we learn that it is difficult to touch a leaf of a healthy mimosa —under which name the sensitive plant is also known—even in the most delicate manner without causing it to close. The great nerve which passes along the centre of the leaf serves as a hinge for the sides to close upon, and this they do with great exactness, the two sides exactly opposing each other. If the pressure is made with considerable force, the opposite leaf of the same pair will be affected at the same time and moved in the same manner. Upon squeezing the leaf still harder, all the leaflets on the same side close immediately, as if resenting the affront. The effect may be even carried so far that the leaf-stalk will bend to the branch from which it issues, and the whole plant collect itself as it were into a bundle.

As soon as evening approaches, the sensitive plant begins to lower its leaves, till at length they rest upon the stem. With the morning light, they gradually re-open. When the leaves have even faded and turned yellow, the plant still continues this action, and retains its sensibility when agitated by external influences. A fine rain will not disturb the mimosa at all; but should the rain fall heavily, and be accompanied by wind, the plant becomes immediately affected. When irritated and made to close by force, the time necessary for the leaves to recover their usual position varies from ten to twenty minutes, according to the season and the hour of the day.

Though heat and cold contribute greatly towards its alternate motion, yet the plant is more sluggish in its movements and less sensitive in winter than in summer. After a branch has been separated from the shrub, the leaves still retain their sensibility, and will shut on being touched. If the end of the detached branch is kept in water, the leaves will continue to act for some time.

If the sensitive plant be plunged into cold water, the leaves will close, but will afterwards re-open; and if touched in this state, will again shut themselves, as if in the open air, but not so quickly. This experiment does not seem to injure the plant. If the extremity of a leaf exposed to the rays of the sun is burned with a lens or a match, it closes instantly; and at the same moment, not only the leaflet which is opposite to it follows its example, but all that are upon the same stalk. If a drop of sulphuric acid is placed upon a leaf so as to remain stationary, the plant is not immediately affected; but when it begins to spread, the irritation is communicated from one leaflet to another, till the whole of them on the affected stalk are closed. Although a branch of this wonderful plant be cut through three-fourths of its diameter, yet the leaves belonging to it retain the same degree of sensibility, and open and shut with their usual freedom. The vapour of boiling water affects the leaves in the same manner as if they were burned, and for several hours they appear benumbed—in fact, seldom recovering during the remainder of the day.

These are some of the principal phenomena connected with this very singular plant. No doubt, other experiments have been made; but these will serve to show how much akin is the delicate organisation of this plant to that of the animal kingdom.

Many conjectures have been formed and many theories raised to account satisfactorily for the working of this exquisite machine; but the mainspring is still hidden, and has, as far as we know, eluded the search of the naturalist. It has been supposed by some that the mimosa is endued with a power of perception which actuates all its motions, and is the connecting link between the animal and vegetable kingdoms. But at least an equally rational theory is, that its movements are purely mechanical. To enter into a discussion as to the relative merits of these and other theories would exceed the limits of this article. We can only contemplate the plant as one of those natural wonders which add to our admiration of mother Nature and her products.

LOVE LIGHTS.

Pretty dreamer, far away,
Where the sheaves are golden,
Listen to a tiny lay
Puck hath late unfolden.

Once a brier loved a rose,
At her feet adoring;
Sweet she glanced from high repose,
Deaf to his imploring.

Came a certain one, yclept
Eros, heaven's grafter,
Stole a rose-twig, and adept
Fashioned it with laughter—

Fixed it soft with cunning whim
On that hopeless brier,
Till the season saw his stem
Lordly grow, and higher.

Then the maid-rose loved him true,
Wedded to her glory:
Sleep, Mellilla's eyelids blue;
I have told my story.

B. C.

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